

**ABSTRACT**

A data transmission method in a mobile communication system is provided for transmitting user data via a common channel when the user data is generated in a suspended state. In a first embodiment, the method includes comparing a length of the generated data with a reference length for normal data transmission in an active state. When the generated data is shorter than the reference length, a generation frequency of the data generated in the suspended state is compared with a reference generation frequency for normal data transmission in the active state. If the generation frequency of the data generated in the suspended state is lower than the reference generation frequency, a transition to a burst substate occurs to segment the data by a frame length of a common traffic channel and then the segmented data is transmitted via the common traffic channel. However, if a burst substate does not exist, the segmented data is transmitted via a previously assigned common traffic channel. In a second embodiment, the method includes, when data to be transmitted is generated in a suspended state, a transmission party segments the data into frames having a specified length and transmits the segmented data via a previously established common traffic channel. Upon reception of the transmitted segmented frames in the suspended state, a reception party reassembles the received frames and transmits the reassembled frame to an upper layer.